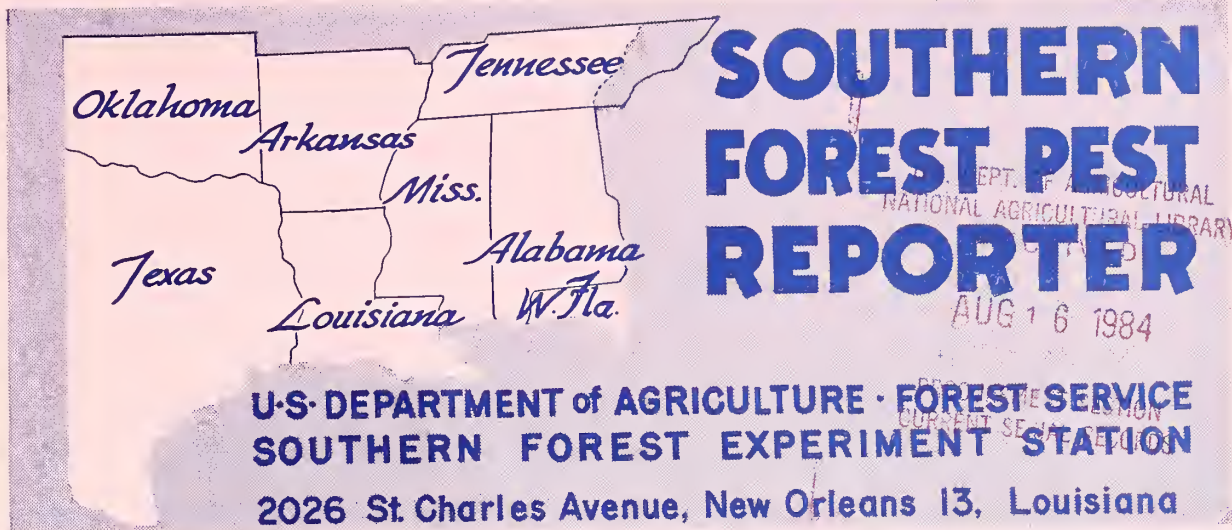


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No. 27

September 16, 1959

..... SOUTHERN PINE BEETLE IS MORE FIRM-
LY ESTABLISHED in east Texas. Infestations in this
State and in Alabama are comparatively small,
yet they may flare up at any time.

..... BLACK TURPENTINE BEETLES ARE LESS
ACTIVE, but remain a problem on many cutting
areas, particularly on wet sites where residual
stands have been damaged by logging.

..... RED-HEADED PINE SAWFLIES CONTINUE
TO BE DESTRUCTIVE in Louisiana and Texas. The
southeast Texas outbreak of another sawfly species
required aerial spraying with DDT.

..... OAK WILT HAS BEEN FOUND FOR THE
FIRST TIME IN OKLAHOMA. Incidence of oak wilt
is high in two Arkansas counties -- Sharp and Logan.

..... STATE BY STATE SUMMARY of forest pest
conditions in the Midsouth, on page 6 of this issue.

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FOREST INSECTS

Southern Pine Beetle

East Texas

The southern pine beetle has continued to increase on industrial lands in Hardin County, and has appeared also in Liberty County. It now occurs over a larger and less accessible area of southeast Texas than in 1958.

A weekly operational flight in early August revealed 27 spot infestations. A few contained over 1,000 beetle trees, but most were small. Heavy summer rains made much of the area inaccessible, especially around Devers, and thus brought control efforts to a standstill. The rate of increase has declined noticeably in recent weeks, but the beetles have become better entrenched since last year. Unless all active spots are controlled before autumn, the beetles may scatter and kill many single trees, which will be undetectable by aerial surveys amidst the fall and winter hardwood coloration. From these overwintering brood trees, new spot infestations may develop unnoticed, and next summer create a much more serious threat than the present one.

Elsewhere in Texas, recent aerial surveys, in cooperation with the Texas Forest Service and industry, found seven small groups of red-topped pines. It is thought that they were killed by southern pine beetles, but this has not yet been confirmed by ground checks.

Louisiana

Last spring an outbreak of the southern pine beetle involving about 100 spruce pines was discovered in East Baton Rouge Parish, where similar small group kills have occurred since 1957. The trees that were attacked had been weakened by flooding. The beetles emerged before controls were applied, but a follow-up aerial reconnaissance survey revealed no further spread. Flights were made over East Baton Rouge Parish and adjoining parishes in May and June with the cooperation of the Louisiana Forestry Commission. Also, an aerial detection survey was made over southeast Louisiana in August. No new infestations were found.

Mississippi

The southern pine beetle has been troublesome on the Homochitto National Forest and private lands in southwest Mississippi in recent years. An aerial survey in early August, however, found only two small groups of red-topped pines suspected of being attacked by the southern pine beetle. The number of single dying trees was unusually low.

Alabama

Aerial surveys in July sampled 8-1/2 million acres where southern pine beetles have been present in recent years. Forty-eight group kills, covering from 1/4 to 20 acres, were reported to landowners concerned. Ground checks found the southern pine beetle, Ips, and black turpentine beetles.

Ips Bark Beetles

Moderate seasonal uptrends of Ips bark beetles have occurred in most States, but no serious outbreaks. Many of the infestations began in trees struck by lightning or damaged by logging machinery. Many single, dying pines were detected in parts of Alabama and on the Sam Houston, Angelina, and Sabine National Forests in Texas. Very few dying trees were found in southwest Mississippi and southeast Louisiana.

A dangerous Ips potential exists in windthrown trees and logging slash in sale areas on the Ozark National Forest, Arkansas. The possibility of beetle dispersal to standing timber will depend largely on rainfall, residual stand vigor, and the rapidity of salvage of infested wind-damaged material.

Black Turpentine Beetles

Black turpentine beetle activity on the Kisatchie National Forest, Louisiana, as elsewhere in the Midsouth, was much less this spring and summer than a year ago. Frequent heavy rains in the Gulf States, however, have made the ground soft, and root damage caused by heavy logging equipment may weaken residual trees and favor the insect. Continued controls will probably be necessary in cutting areas where stands have been damaged.

On the Bankhead National Forest in north-central Alabama, 5 spots of red-tops, each covering from 5 to 20 acres, were detected from the air, but ground checking has not been completed. Although the spots resembled southern pine beetle infestations, the black turpentine beetle is believed responsible. Six other spots within the National Forest boundary, also thought to represent black turpentine beetle activity, were observed along stream bottoms.

Pine Sawflies

The red-headed pine sawfly, Neodiprion lecontei, was prevalent on young pines of all species in Louisiana and Texas. Scattered occurrences were reported also in Oklahoma, Arkansas, and Mississippi, but damage was negligible.

Several hundred acres of loblolly and longleaf pines on the Evangeline District of the Kisatchie National Forest, Louisiana, required aerial and ground spraying with DDT in June. The insecticide, together with heavy egg parasitism by a Chalcid wasp, appeared to have controlled the insects. Nevertheless, a second spraying was necessary on part of the area in late July. Overlapping broods and rapid reproduction apparently caused the unpredicted buildup.

The sawfly Neodiprion excitans defoliated 25,000 acres of loblolly pine in southeast Texas in the fall of 1958. During the following

months, parasites and predaceous mammals destroyed many of the overwintering cocoons. It was thought that control had been effected, but several broods developed during late spring and summer. By July, stands severely defoliated last fall were again threatened, and aerial spraying with DDT was recommended to prevent tree mortality and further growth loss. Approximately 17,000 acres of the more heavily infested timber were sprayed in late July and early August. A larval disease, probably a virus, spread rapidly through the treated and untreated areas when the project was near completion. The dual action of the chemical and disease should reduce the sawfly to an endemic level, but the area must be watched closely for a possible buildup again this fall or in 1960.

Southern Forest Insect Work Conference

Forest entomologists and others interested in forest insect problems in the South and Southeast are reminded of the Fourth Annual Southern Forest Insect Work Conference to be held October 13-15 at the Hotel Bentley, Alexandria, Louisiana.

FOREST DISEASES

Oak Wilt

Aerial and ground surveys were made around the southern and western edges of the known range of oak wilt (Ceratocystis fagacearum) in Arkansas in June. Wilt was found for the first time in Searcy County. However, the general range was not extended because the disease already had been found in adjacent counties to the east and west. An intensive outbreak was found in the vicinity of Paris, Logan County, at the southern edge of the disease area. Logan County and Sharp County, where a heavy buildup had previously been found, are the only areas in Arkansas where an alarming amount of wilt occurs. In both places the stands are of low quality and on very poor sites. This, however, should not be construed as indicating that better quality oak stands will be immune from important losses.

A limited survey in eastern Oklahoma disclosed two oak wilt trees in Adair County about 10 miles west of the Arkansas border--the first report of oak wilt in Oklahoma.

Persimmon Wilt

Persimmon wilt (Cephalosporium diospyri) is abundant in several areas of eastern Oklahoma. This fast-killing disease has now been found in Oklahoma, Texas, Mississippi, Alabama, Tennessee, and several southeastern States. So far, however, it is not known to occur in the bottom-land forests where persimmon reaches merchantable size as a timber tree.

Phloem Necrosis

Phloem necrosis has almost wiped out winged elms in one section of Montgomery, Alabama. The virus causing necrosis is transmitted by a leafhopper and, consequently, the disease can be controlled indirectly by using an insecticide on elms. Where elms have been killed by this virus, replacement plantings should probably be with Chinese and Siberian elms, which are resistant not only to phloem necrosis but also to the Dutch elm disease.

Cone Rust

Cone rust (Cronartium strobilinum) was again epiphytotic on slash pine in the flatwoods along the Gulf Coast. In some areas in south Mississippi, 70 percent of the cone crop was lost. Tests on controlling cone rust with fungicidal sprays have not been very promising. Therefore, it is extremely important that seed orchards for slash and longleaf pine be located in areas where cone rust does not occur in epiphytotic amounts. "Southern Cone Rust," Forest Pest Leaflet 27, U.S. Department of Agriculture, summarizes recent information on the disease. Copies are available from the Southern Forest Experiment Station.

Root Rot

Root rot (Fomes annosus) killed many of the loblolly pines left after thinning in a plantation in Harrison County, Mississippi. Attacks after thinning of plantations in the Midsouth are unusual, but there is little doubt that Fomes annosus, a common fungus, can be destructive under some conditions. Research is needed to determine what conditions favor attack of this fungus and how such attack can be prevented and controlled.

STATUS OF MAJOR FOREST PESTS IN THE MIDSOUTH AS OF SEPTEMBER 1959

State	Southern pine beetle	Black turpentine beetle	Ips bark beetles	Red-headed pine sawfly	Excitans pine sawfly	Tree diseases
Oklahoma	None.	Minor importance.	No reports.	One minor infestation.	None.	First oak wilt occurrence. Per-simmon wilt common.
Arkansas	None.	Small localized infestations in cutting areas slowly increasing.	Gradual seasonal increase; threat developing.	Scattered infestations. Damage negligible.	None.	Oak wilt build-up in Logan and Sharp Counties.
East Texas	Incipient outbreak gradually becoming better established.	Continuing problem in many cutting areas.	High concentrations on some National Forests; otherwise endemic.	Moderately severe in many young plantations and natural reproduction.	Recurrent outbreak required aerial spraying on 17,000 acres.	No reports.
Louisiana	Endemic.	A continuing problem in many cutting areas.	Less active than usual.	Severe in young plantations, requiring control.	No reports.	No reports.
Mississippi	Endemic.	Same as in Louisiana.	Same as in Louisiana.	Scattered and unimportant.	No reports.	Cone rust severe on slash pine. Root rot is killing loblolly in Harrison County.
Alabama	Relatively unimportant but potentially dangerous.	Same as in Louisiana and Mississippi.	More prevalent than last year but not serious.	No problem.	No reports.	Phloem necrosis on elms destructive in Montgomery.
West Florida	No	reports of	unusual	activity.		
Central and west Tennessee	No	reports of	unusual	activity.		

FOREST SERVICE

Research Center
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